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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,701	06/26/2003	Takashi Inui	JP920020120US1	5025

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EXAMINER
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SHERMAN, STEPHEN G

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/606,701

Applicant(s)

INUI ET AL.

Examiner

Stephen G. Sherman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on June 26, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on June 26, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because of undue length. The abstract is more than 150 words. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 6 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozawa (JP 408162864 A).

Regarding claim 1, Ozawa discloses an input device comprising: a designated value change unit (Figure 1, item 8) which changes a designated value when inputted by an operator (Figure 1 shows these designated values being inputted by items 5 and 6, the Up and DOWN buttons) by a predetermined first variation amount (The detailed description paragraph 7, Means for Solving the Problem, 2<sup>nd</sup> sentence states that "...Sound volume is made to increase for every step unit defined beforehand..." meaning that these steps were predetermined) when it receives a first designated value

change directive requesting the designated value to be changed (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that the UP key is pressed after the down key which initiates a value change directive and the volume can then be changed, in this case made smaller); and a variation amount change unit (Figure 1, item 9) which changes the variation amount in said designated value change unit to a second variation amount that is smaller than the first variation amount when it receives a directive for changing the designated value in a direction different from the direction specified by the first designated value change directive within a predetermined variation amount change period after receiving the first designated value change directive (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated within predetermined time after being applied to the sound-volume control unit equipped with the apparatus in step according to actuation of the UP key 5 and the DOWN key 6 and operating the DOWN key 6 After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that if the first designated value change directive were in the down direction and the second designated value change directive is in the up direction, and is made with in a predetermined amount of

time the variation amount is lessened. This is also shown in Figure 4, when the variation amount A changes to variation amount B. The variation amount A was made in the down direction but when the UP key was pressed, within a predetermined time period as explained earlier, the variation amount was changed to amount B which can graphically be seen to be less than amount A.), and that maintains the variation amount in said designated value change unit as the first variation amount when it receives a directive for changing the designated value in a direction different from the direction specified by the first designated value change directive after the variation amount change period has lapsed (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that if the UP key were to have been operated after the variation amount change period had lapsed, then the variation amount that would be used would be the previously determined variation amount).

Regarding claim 2, Ozawa discloses the input device according to Claim 1, wherein said designated value change unit comprises: an increase unit (Figure 1, item 8) which increases the designated value by the first variation amount when it receives an increase directive which requests the designated value to be increased (Figure 1, the pressing of the UP key); a decrease unit (Figure 1, item 8) which decreases the designated value by the first variation amount when it receives a decrease directive

requesting the designated value to be decreased (Figure 1, the pressing of the DOWN key); and said variation amount change unit (Figure 1, item 9) changes the variation amount of the designated value for both said increase unit and said decrease unit to the second variation amount if one of said increase unit and said decrease unit receives a directive within a predetermined period after the other of said increase unit and said decrease unit receives the directive (In the Detailed Description section, paragraph 11, second sentence it states: "9 is ROM which stores the sound-volume modification data of the electronic volume IC 4" The examiner interprets this to mean that the ROM is the variation amount change unit, and as seen in Figure 1 is connected to the CPU which would contain the increase and decrease units since the Up and DOWN buttons are connected to the CPU. The ROM would then change the values in the CPU if a directive were received within a predetermined amount of time that was different from a previous directive direction as explained above.)

Regarding claim 3, Ozawa discloses the input device according to Claim 2, further comprising: an increase button which allows the operator to input the increase directive (Figure 1, item 5); and a decrease button which allows the operator to input the decrease directive (Figure1, item 6).

Regarding claim 5, Ozawa discloses the input device according to Claim 1, wherein when the variation amount of the designated value based on the designated value change directive is changed to the second variation amount, said variation amount change unit restores the variation amount of the designated value to the first variation amount if it is determined that a variation amount retention period has lapsed

after the previous designated value change directive is received by said designated value change unit (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that the predetermined time is the variation amount retention period and that if this period had lapsed the previous amount, the larger volume, would be restored as the variation amount).

Regarding claim 6, Ozawa discloses the input device according to Claim 1, further comprising: an aggregate change management unit which manages an aggregate change in the designated value when said variation amount change unit changes the variation amount of the designated value for said designated value change unit to the second variation amount (Paragraph 14 of the detailed description second sentence states: "Here, a step counter is a value which shows the grand total of the count of actuation of the UP key 5 or the DOWN key 6..." The examiner interprets this step counter to be the aggregate change management unit as it would count up when the Up button would be pressed and down when the DOWN button would be pressed as any normal counter would), wherein said variation amount change unit restores the variation amount of the designated value to the first variation amount when the aggregate change exceeds the first variation amount (Figure 4 shows a graphical representation of amount changes A and B. In this figure it can be seen that after

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increasing the variation amount by an amount B three times and it equals the amount of A, the next increase amount becomes amount A again).

Regarding claim 11, Ozawa discloses an input method comprising the steps of: inputting a designated value specified by an operator (By pressing the UP or DOWN keys 5 and 6 in Figure 1): changing the designated value by a predetermined first variation amount (The detailed description paragraph 7, Means for Solving the Problem, 2<sup>nd</sup> sentence states that "...Sound volume is made to increase for every step unit defined beforehand..." meaning that these steps were predetermined) upon receiving a first designated value change directive requesting the designated value to be changed (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that the UP key is pressed after the down key which initiates a value change directive and the volume can then be changed, in this case made smaller); determining whether a directive for changing said designated value in a direction different from that of the first designated value change directive is received (The detailed description paragraph 7, Means for Solving the Problem, 2<sup>nd</sup> sentence states that "...Sound volume is made to increase for every step unit defined beforehand..." meaning that these steps were predetermined) upon receiving a first designated value change directive requesting the designated value to be changed (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If



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the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time.” The examiner interprets this to mean that if the device is capable of changing the values that it must be able to determine whether a directive has been received or not); and changing the variation amount for said designated value change unit to a second variation amount that is smaller than the first variation amount if it is determined that a directive for changing the designated value in a direction different from that of the first designated value change directive is received within a predetermined variation amount change period after receiving the first designated value change directive (The detailed description paragraph 7, Means for Solving the Problem, 2<sup>nd</sup> sentence states that “...Sound volume is made to increase for every step unit defined beforehand...” meaning that these steps were predetermined) upon receiving a first designated value change directive requesting the designated value to be changed, and keeping the variation amount for the designated value change directive set at the first variation amount if it is determined that a directive for changing the designated value in a direction different from that of the first designated value change directive has been received after a predetermined period after receiving the designated value change directive (The detailed description paragraph 7, Means for Solving the Problem, 2<sup>nd</sup> sentence states that “...Sound volume is made to increase for every step unit defined beforehand...” meaning that these steps were predetermined) upon receiving a first designated value change directive requesting the designated value to be changed (The

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detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that the second variation amount is used if a directive is received within a predetermined amount of time and that if a directive is not received then the previous larger value is used).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa (JP 408162864 A) in view of Shinada et al. (US Patent 5,940,517).

Regarding claim 4, Ozawa discloses the input device according to Claim 1. Ozawa fails to teach of a display unit which visually displays information about changes in the designated value or changes in the variation amount. Shinada et al. disclose a display unit which visually displays information about changes in the designated value or changes in the variation amount (Figure 3 shows a display device which displays information about changes in the designated value through the use of a bar graph). Therefore it would have been obvious to "one of ordinary skill" in the art to combine the teachings of Ozawa and Shinada et al. in order to allow a user to view information about the changes being made by the device.

7. Claims 7-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa (JP 408162864 A).

Regarding claim 7, Ozawa discloses the input device according to Claim 1, wherein: if the variation amount is changed to the second variation amount, said designated value change unit changes the designated value using the second variation amount, as explained by the examiner above. Ozawa fails to teach that if the designated value change directive is received again within the variation amount change period after changing the designated value in a direction different from that of the previous designated value change directive, said variation amount change unit changes the variation amount for said designated value change unit to a third variation amount smaller than the second variation amount. It would have been obvious, however, to allow for a third even smaller variation amount in the same manner as the first and second in order to be able to further refine the amount being adjusted.

Regarding claim 8, Ozawa discloses an input device comprising: a designated value change unit which changes a designated value when inputted by an operator by a predetermined first variation amount when it receives a first designated value change directive requesting the designated value to be changed', and a variation amount change unit, coupled to said designated value change unit, which after receiving a second designated value change directive which changes the designated value in a direction different from that of the first designated value change directive, as explained by the examiner above. Ozawa fails to teach of a variation amount change unit, coupled to the said designated value change unit, which after receiving a third designated value change directive for changing the designated value in a direction different from that of the second designated value change directive, and a fourth designated value change directive for changing the designated value in a direction different from that of the third designated value change directive in sequence at intervals shorter than a predetermined variation amount change period, changes the variation amount for the fourth and later designated value change directives to a second variation amount smaller than the first variation amount. It would have been obvious, however, to allow for a third and a fourth even smaller variation amounts after the first and second ones in order to be able to further refine the amount being adjusted.

Regarding claim 9, Ozawa discloses an input device comprising: a designated value change unit which changes a designated value when inputted by an operator by a predetermined first variation amount each time it receives a designated value change directive requesting the designated value to be changed', and a variation amount

change unit, coupled to said designated value change unit, that changes the variation amount for said designated value change unit to a second variation amount smaller than the first variation amount, as is explained by the examiner above. Ozawa fails to teach of changing the variation amount if it receives the designated value change directive at a frequency lower than a predetermined frequency. Ozawa does teach of changing the variation amount using time and since time and frequency are related, it would have been obvious to "one of ordinary skill" in the art to change the variation amount using frequency instead of time.

Regarding claim 10, Ozawa discloses an input device comprising'. a designated value change unit for changing a designated value when inputted by an operator by a predetermined first variation amount when it receives a designated value change directive requesting the designated value to be changed', and a variation amount change unit, coupled to said designated value change unit, which changes the variation amount for said designated value change unit to a second variation amount smaller than the first variation amount, as explained by the examiner above. Ozawa fails to teach of a variation amount change unit which changes the variation amount for said designated value change unit to a second variation amount smaller than the first variation amount if it receives both a directive for changing the variation amount for said designated value change unit and the designated value change directive. It is obvious, however, that the variation amount would only be changed after the directive for changing the variation amount for said designated value change unit and the designated value change directive both occur, which happens when the UP key is

pressed within a predetermined period of time from the DOWN key being pressed, or vice versa, so that the variation amount would not be changed if the designated value change directive were not sent, such as if the predetermined time period had expired.

Regarding claim 12, Ozawa discloses an input method comprising the steps of: inputting a designated value specified by an operator (By pressing the UP or DOWN keys 5 and 6 in Figure 1); changing the designated value by a predetermined first variation amount (The detailed description paragraph 7, Means for Solving the Problem, 2<sup>nd</sup> sentence states that "...Sound volume is made to increase for every step unit defined beforehand..." meaning that these steps were predetermined) upon receiving a first designated value change directive requesting the designated value to be changed (The detailed description paragraph 7, Means for Solving the Problem, 1<sup>st</sup> sentence states: "If the UP key 5 is operated...After the DOWN key 6 is operated, the sound-volume control means 4 and 8 are constituted so that augend of some volume may be made fewer than the case where the UP key 5 is operated after predetermined time." The examiner interprets this to mean that the UP key is pressed after the down key which initiates a value change directive and the volume can then be changed, in this case made smaller). Ozawa fails to teach of changing a variation amount for a fourth and later designated value change directives to a second variation amount smaller than the first variation amount after receiving a second designated value change directive for changing the designated value in a direction different from that of the first designated value change directive, a third designated value change directive which changes the designated value in a direction different from that of the second designated value

change directive, and the fourth designated value change directive for changing the designated value in a direction different from that of the third designated value change directive in sequence at intervals shorter than a predetermined variation amount change period. It would be obvious, however, as stated in claim 8, to allow for a third and a fourth even smaller variation amounts after the first and second ones in order to be able to further refine the amount being adjusted.

Regarding claim 13, Ozawa discloses implementing functions effective to: input a designated value specified by an operator', change the designated value by a predetermined first variation amount when receiving a first designated value change directive requesting the designated value to be changed', change the variation amount to a second variation amount that is smaller than said first variation amount when receiving a directive for changing the designated value in a direction different from the direction specified by the first designated value change directive within a predetermined variation amount change period after receiving the first designated value change directive', and maintain the variation amount as the first variation amount when receiving a directive for changing the designated value in a direction different from the direction specified by the first designated value change directive after the variation amount change period has lapsed, as explained in the claims above. Ozawa fails to teach of a program product comprising: a computer usable medium having computer readable program code embodied therein for use with a computer, the computer readable program code in said program product, however, it would have been obvious to "one of ordinary skill" in the art to provide the input device and program code, as

explained in the claims above, on a computer usable medium for use on a computer in order to allow a user to use the input device to control a function on the computer.

Regarding claim 14, Ozawa teaches implementing functions effective to: input a designated value specified by an operator; change the designated value by a predetermined first variation amount when receiving a first designated value change directive requesting the designated value to be changed', and when receiving a second designated value change directive for changing the designated value in a direction different from that of the first designated value change directive, as explained in the claims above. Ozawa fails to teach of a third designated value change directive for changing the designated value in a direction different from that of the second designated value change directive, and a fourth designated value change directive for changing the designated value in a direction different from that of the third designated value change directive in sequence at intervals shorter than a predetermined variation amount change period, change the variation amount for the fourth and later designated value change directives to a second variation amount smaller than the first variation amount. It would be obvious to "one of ordinary skill" in the art to allow for a third and a fourth even smaller variation amounts after the first and second ones in order to be able to further refine the amount being adjusted. Ozawa also fails to teach of a program product comprising: a computer usable medium having computer readable program code embodied therein for use with a computer, the computer readable program code in said program product, however, it would have been obvious to "one of ordinary skill" in the art to provide the input device and program code, as explained in the claims



above, on a computer usable medium for use on a computer in order to allow a user to use the input device to control a function on the computer.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS

29 July, 2005

  
REGINA LIANG  
PRIMARY EXAMINER